



GARY R. HERBERT
Governor

SPENCER J. COX
Lieutenant Governor

State of Utah

DEPARTMENT OF NATURAL RESOURCES

BRIAN C. STEED
Executive Director

Division of Oil, Gas and Mining

JOHN R. BAZA
Division Director

October 30, 2019

John Byars, General Manager
Canyon Fuel Company, LLC
597 South SR24
Salina, Utah 84654

Subject: Conditional Approval of South Fork Lease Modification, Sufco Mine, Canyon Fuel Company, LLC, Task ID #5995, C/041/0002

Dear Mr. Byars:

The above-referenced amendment is approved conditioned upon receipt of 2 clean copies prepared for incorporation. Please submit these copies by November 29, 2019. Once received, final approval will be granted. At that time, a revised permit will be issued to reflect the additional acreage approved for mining activity.

Additionally, a stamped incorporated copy of the approved plans will also be returned to you for insertion into your copy of the Mining and Reclamation Plan.

If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen
Coal Program Manager

SKC/sqs

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Dear Mr. Byars:

The above-referenced amendment is approved conditioned upon receipt of 2 clean copies prepared for incorporation. Please submit these copies by November 29, 2019. Once we receive these copies, final approval will be granted. Also, upon final approval, a revised five-year permit will be issued.

A stamped incorporated copy of the approved plans will also be returned to you at that time, for insertion into your copy of the Mining and Reclamation Plan.

If you have any questions, please call me at (801) 538-5350.

Sincerely,

Steve Christensen
Coal Program Manager

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Technical Analysis and Findings

Utah Coal Regulatory Program

PID: C0410002
TaskID: 5995
Mine Name: SUFCO MINE
Title: SOUTH FORK LEASE MODIFICATION

General Contents

Right of Entry

Analysis:

The amendment meets the State of Utah R645 requirements for Right of Entry.

The amendment proposes revisions to two leases currently held by the Permittee. The two revised leases include an additional 620 acres added to the Greens Hollow Lease (UTU-84102) and an additional 170 acres to the Quitcupah Lease (U-63214) for a total of an additional 790 acres. The additional acreage is significantly less than the 15% threshold for triggering a significant revision or Federal Mine Plan Determination. Nonetheless, the Division of Oil, Gas and Mining requested a review of the proposed lease modification from the Office of Surface Mining (OSM). OSM concluded (via hard-copy letter dated July 11th, 2019) that the "a mining plan approval from the ASLM is not required for the permit revision to the mining within the South Fork Lease Modifications".

The Bureau of Land Management executed the lease modifications and provided documentation of their approval on February 22nd, 2019.

schriste

Environmental Resource Information

Historic and Archeological Resource Information

Analysis:

The amendment meets the State of Utah R645-301-411 requirements for Historic and Archeological Resource Information.

Appendix 4-2 of the amendment contains a Determination of Significance and Effect letter between the Manti-La Sal National Forest and the SHPO. MLSNF recommended no historic properties would be affected by the project, to which SHPO agreed. The letter was signed in October of 2017. A tribal consultation letter from the Paiute Indian Tribe of Utah indicating no objections and concurrence with the determination of eligibility was also included in Appendix 4-2.

tmiller

Geologic Resource Information

Analysis:

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The amendment meets the State of Utah R645 requirements for Geologic Resource Information.

The South Fork Lease Modifications (SFLM) are located just south and west of the previously approved Greens Hollow lease. The geology of the SFLM is very similar to the Green's Hollow lease area. A Geology map is provided in Plate 6-1. The general stratigraphy of the area includes (from lower to upper), the Starpoint, Blackhawk Castlegate, Price River and North Horn formations. Geology at the surface of the SFLM is all sedimentary rock, primarily of the North Horn formation which is tertiary and cretaceous in age. A small amount of Price River formation crops out on the western portion of the SFLM.

Mining will take place in the upper Hiawatha coal seam where overburden ranges from 1,250 feet to 2,650'. No escarpments are found in the area. The coal dips to the northwest at approximately 2 degrees. Plate 6-1 shows a number of small projected faults in the area that trend NW to SE.

Plate 6-1 depicts the locations of five drill holes (13-5-1, 8.23.1, 16-11-1, 16-14-1 and 14-22-2) advanced within the SFLM and their corresponding elevations. Appendix 6-1, Drilling and Coal Quality Information, South Fork Lease Modification Area within the Confidential File provides detailed drill logs for each of the aforementioned holes as well as the laboratory analysis of the samples taken at intervals within each hole. The lab result values provided in the Appendix 6-1 are essentially the same as previously submitted analyses from drill holes advanced in the area adjacent to the SFLM.

schriste

Hydro Baseline Information

Analysis:

The amendment meets the State of Utah R645 requirements for Baseline Information.

The amendment provides baseline information for the surface water and groundwater resources within and adjacent to the area proposed for mining. The information is included in Appendix 7-29 in narratives, tables and figures as well as in Plates 7-2, 7-3 and 7-10. Tables 1 and 2 and Figure 2 in Appendix 7-29 provide the monitoring site locations and five years of baseline monitoring quality and quantity data for each site.

Baseline monitoring sites and data are provided in Tables 1 and 2. The baseline monitoring springs and stream monitoring sites are distributed across all the surficial geologic units within the lease area. Monitoring has taken place at the sites during the 2nd, 3rd, and 4th quarters for over four years, establishing baseline variability of quantity and quality and both low and high flows. The water quantity and quality data is provided in Table 2 within Appendix 7-29, with stiff diagrams also provided in Figure 6.

adaniels

Probable Hydrologic Consequences Determination

Analysis:

The amendment meets the State of Utah R645 requirements for Probable Hydrologic Consequences Determination.

The amendment provides narratives, maps and data on baseline surface and groundwater information for the South Fork Lease modification in Appendix 7-29. Baseline water monitoring of the proposed mining area began in 2013 and continues through to the present. These baseline data are analyzed to make the determination that no impacts to water quality and quantity are anticipated during coal mining and reclamation operations. Additional factors supporting these findings include a summary description of the climate and geology for the mining area.

The character of the geologic formations in the overburden reduces the potential for impacts to the hydrologic balance. Overburden ranges from about 1,300 to 2,600 feet in the proposed mining area. Subsidence will likely have little to no impact on surface water features and shallow aquifers. The presence of interbedded layers of impermeable claystone will help to seal cracks and prevent downward migration of surface and shallow sub-surface water resources during active mining. The brittle Castlegate Sandstone does not outcrop within the lease area. Reducing the likelihood of impacts to surface water resources as seen in the past mining in the Pines lease.

The South Fork Lease Modification is a small extension onto the western edges of the Quitcupah and Greens Hollow Leases. The mining techniques implemented in the Quitcupah lease will be implemented in this this small lease modification as well. Therefore, no adverse impacts due to acid-forming or toxic-forming materials, sediment yields from

disturbed areas, flooding or streamflow alteration or to groundwater and surface water availability are anticipated to occur.

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Maps Archeological Site Maps

Analysis:

The amendment meets the State of Utah R645-301-411 requirements for Archeological Site Maps.

Plate 5-10C has been redesigned such that the relevant information is now legible. The map indicates, and is supported by Manti-La Sal National Forest and SHPO findings, that no NRHP-eligible sites are located within or adjacent to the limits of potential subsidence.

tmiller

Operation Plan

Subsidence Control Plan Subsidence

Analysis:

The amendment meets the State of Utah requirements for Subsidence Control Plans.

The application was previously deficient because the descriptions on several of the included plates were not clear. The Potential Subsidence Limits maps (Plates 5-10 and 5-10C) include an illustration of the underground mine workings overlain with surface facilities and overburden isopach contours. The previous submittal was determined to be deficient because the linework that illustrates the potential subsidence limits was not legible within the plate due to overlying isopach contours obscuring all other features. The current submittal appears to have corrected this issue. A teal colored line has been drawn around the proposed South Fork mine workings, and will be changed to a heavy black dashed line according to the legend on each plate upon approval.

jeatchel

Fish and Wildlife Protection and Enhancement Plan

Analysis:

The application meets the State of Utah R645-301-322 requirements for Fish and Wildlife Protection and Enhancement Plan. Appendix 3-17 of the amendment includes a report titled "A Biological Assessment and Biological Evaluation for the South Fork Federal Coal Lease Modifications" created by Tetra Tech in 2018. This report details consultations with the Utah DWR, the U.S. FWS, as well as the Fishlake and Manti-La Sal National Forests. The results of these consultations make up the primary portion of the report. DOGM consultation with state and federal agencies in 2019 did not reveal any additional concerns relating to this amendment. There is not anticipated to be any impact to state or federally protected wildlife or plant species as a result of the proposal.

tmiller

Fish and Wildlife Endangered and Threatened

Analysis:

The application meets the State of Utah R645-301-358 requirements for Endangered and Threatened Fish and Wildlife. Appendix 3-17 of the amendment includes a report titled "A Biological Assessment and Biological Evaluation for the South Fork Federal Coal Lease Modifications" created by Tetra Tech in 2018. This report details potential impacts to federally endangered, threatened, and proposed species as well as Fishlake and Manti-La Sal National Forest sensitive wildlife, plant, and management indicator species. Due to the lack of species occurrences, habitats, impacts to habitats, and potential mitigation measures, no impacts or effects are expected to occur to any of the identified species. Consultation with state and federal agencies did not reveal any additional concerns relating to this proposal.

tmiller

Fish and Wildlife Bald and Golden Eagles

Analysis:

The application meets the State of Utah R645-301-322 requirements for Fish and Wildlife Bald and Golden Eagles. No known bald or golden eagle nests are located within or near the area of potential subsidence. Consultation with Manti-La Sal National Forest did not reveal any additional eagle nesting concerns relating to this proposal. SUFCO committed to performing a raptor survey in the South Fork Lease Modification area in 2019 and beyond as described in Section 3.3.3.3 of the MRP.

tmiller

Hydrologic Ground Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Groundwater Monitoring.

The amendment has added 8 ground water monitoring sites, including most recently water right 94-1397, to the operational monitoring plan in Table 7-2 of Chapter 7. This water right spring monitoring site 94-1397 will ensure monitoring of the surface and shallow subsurface water resources in areas that will experience subsidence from this amendment, as the other monitoring sites are outside of the extent of the panels.

adaniels

Hydro Surface Water Monitoring

Analysis:

The amendment meets the State of Utah R645 requirements for Surface Water Monitoring.

The amendment adds stream monitoring sites S. Fork Quitchupah Creek Upper, Lower and Skutumpah Creek Upper. The S. Fork Quitchupah Creek Lower monitoring site will ensure monitoring along the proposed southernmost longwall panel.

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Maps Monitoring and Sampling Locations

Analysis:

The amendment meets the State of Utah R645 requirements for Monitoring and Sampling Location Maps.

The following hydrology maps have been updated as part of this amendment: Plate 7-2 "Surface and Groudwater Rights - Quitchupah Tract", Plate 7-3 "Hydrologic Monitoring Stations", and Plate 7-10 "Operational Hydrologic Monitoring Stations". These updated plates correspond with updated Tables 7-12 and 7-2 in chapter 7 that correspond with the water monitoring additions.

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